

Notice of Allowability

Application No.

10/735,123

Examiner

Russell Frejd

Applicant(s)

KELLER ET AL.

Art Unit

2128

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the amendment and IDS received 15 August 2007.
2. ☒ The allowed claim(s) is/are 3-6, 13, 14 and 16-65.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☒ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☒ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date 1 October 2007.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date 8.15.07
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),
Paper No./Mail Date _____.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

Russell Frejd
RUSSELL FREJD
PRIMARY EXAMINER

In re Application of: Keller et al.

Allowance of Application # 10/735,123

1. The following communication is in response to applicant's amendment and IDS received 15-August-2007. Claims 3-6, 13, 14, 16-65 are pending in the application. Claims 1, 2, 7-12 and 15 are canceled.

Original claim 47 was incorrectly left out of the claim sequence due to an admitted error by Applicant [see the discussion in the Introduction statement under Applicant's remarks in this amendment]. For this reason, claims 48-66 are renumbered in section 2.2 below, as claims 47-65.

Examiner's Amendment

2. An Examiner's Amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 C.F.R. 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the Issue Fee. Authorization for this Amendment was given by Stephen Durant, No. 31,506, on 11-October-2007.

2.1 In the Specification:

section [0030] line 1 Change "13D" to --13C--.

2.2 In the Claims: [In compliance with 37 CFR 1.126]

Renumber the claim numbers on line 1 of each of the following claims respectively:

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Change: "48" to --47--.

Change: "49" to --48--.

Change: "50" to --49--.

Change: "51" to --50--.

Change: "52" to --51--.

Change: "53" to --52--.

Change: "54" to --53--.

Change: "55" to --54--.

Change: "56" to --55--.

Change: "57" to --56--.

Change: "58" to --57--, and "article of claim 57" to --article of claim 56--.

Change: "59" to --58--, and "article of claim 57" to --article of claim 56--.

Change: "60" to --59--, and "article of claim 57" to --article of claim 56--.

Change: "61" to --60--.

Change: "62" to --61--, and "manufacture of claim 61" to --manufacture of claim 60--.

Change: "63" to --62--, and "article of claim 61" to --article of manufacture of claim 60--.

Change: "64" to --63--, and "manufacture of claim 61" to --manufacture of claim 60--.

Change: "65" to --64--, and "manufacture of claim 64" to --manufacture of claim 63--.

Change: "66" to --65--, and "manufacture of claim 64" to --manufacture of claim 63--.

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Reasons for Allowance

4. The following is an Examiner's Statement of Reasons for the indication of allowable subject matter.

4.1 The improvement of the present invention comprises, in various embodiments, a method of determining aggressor-induced delay change in a victim net of a stage of an integrated circuit design, wherein the stage includes a victim net driver gate, a receiver gate and an interconnect network including a victim net and an aggressor net, the method producing a value representing a difference between delay associated with a simulated noiseless transition and delay associated with a simulated noisy transition. This patentable distinction is included in each of the independent claims, nos. 3, 34, 40, 56 (renumbered) and 60 (renumbered).

Furthermore, claims 13, 19, 21, and 31, define an embodiment for associating current drawn by a driver circuit output node in response to voltages applied to the driver circuit input and output nodes.

4.2 The instant application is directed to a non-obvious improvement over the information described in the article authored by Keller et al., entitled A Robust Cell-Level Crosstalk Delay Change Analysis, which teaches crosstalk-induced delay change analysis employing optimization methods to search for worst aggressor alignment, and computing crosstalk induced delay change on each stage considering the impact on downstream logic.

4.3 The art of record, either individually or in combination, fails to teach, suggest, or render obvious the specific arrangement of elements in the same combination as now required by the

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amended claims. In view of the foregoing, the claims of the present application are found to be patentable over the prior art.

Response Guidelines

5. Any comments considered necessary by applicant **MUST** be submitted no later than the payment of the Issue Fee and, to avoid processing delays, should preferably accompany the Issue Fee. Such submissions should clearly be labeled "Comments on Statement of Reasons for Allowance".

5.1 Any response to the Examiner in regard to this allowance should be

directed to: Russell Frejd, telephone number (571) 272-3779, Monday-Friday from 0530 to 1400 ET, **or** the examiner's supervisor, Kamini Shah, telephone number (571) 272-2279. Inquires of a general nature or relating to the status of this application should be directed to the TC2100 Group Receptionist (571) 272-2100.

mailed to: Commissioner of Patents and Trademarks
P.O. Box 1450, Alexandria, VA 22313-1450

or faxed to: (571) 273-8300

Hand-delivered responses should be brought to the Customer Service Window, Randolph Building, 401 Dulany Street, Alexandria, VA, 22314.

Date: 29-September-2007

/Russell Frejd/
Primary Examiner AU 2128

**RUSSELL FREJD
PRIMARY EXAMINER**